Video Model Deformation Software Configuration Management Plan

Version 1 Revision 0

Approved by: John Doe, Project Manager Date Approved: 08/04/2000

Approved by: Jane Doe, Software Manager Date Approved: 08/04/2000

1 – Introduction

This Software Configuration Management Plan (SCMP) contains the software configuration management (SCM) planning information required to develop Video Model Deformation (VMD) software in the Instrumentation Systems Development Branch (ISDB).

2 – Responsibilities

The Software Manager, Jane Doe, has determined that a Software Configuration Control Board (SCCB) is not required for this project. Therefore, overall SCM responsibility will reside with the Software Configuration Manager, Jane Doe or her qualified designee.

3 – SCM Activities

The project activities subject to configuration control are discussed in the following sections.

3.1 Configuration Item Identification

The 'VMD' identifier will be used in the first position of all Configuration Item (CI) file names to indicate the VMD project. The second position will contain an acronym that identifies the contents of the file. The version and revision numbers will follow, beginning with version 1 revision 0 for the first approved product. The revision number will be incremented for minor changes/additions, and the version number will be incremented and the revision number reset to 0 when major changes and/or additions to the functionality are incorporated. The following examples demonstrate the format to be used:

VMD-SPMP-Ver{ver}-Rev{rev}	Software Project Management Plan
VMD-SCMP-Ver{ver}-Rev{rev}	Software Configuration Management Plan
VMD-SR-Ver{ver}-Rev{rev}	Software Requirements
VMD-CI-Ver{ver}-Rev{rev}	Configuration Item List
VMD-ZIP-Ver{ver}-Rev{rev}	Baseline
VMD-STP-Ver{ver}-Rev{rev}	Software Test Plan
VMD-STPR-Ver{ver}-Rev{rev}	Software Test Plan Results

where {ver} is the version number and {rev} is the revision number.

The initial CI List is provided in Attachment 1. Changes or additions to the list will be made by the Software Configuration Manager and approved by the Project Manager. As all source, object, and executable files are identified, they will be added to the CI List. After approval of the SCMP, the CI List will be maintained as a separate CI.

Attachment 2 describes the locations of development and baseline files.

3.2 Software Change Control

The Software Development Team shall effect improvements or enhancements as a result of the Software Change Request (SCR) process or the Problem Reporting and Corrective Action (PRACA) process. The SCR process should address any required change to baseline code that is a result of changing requirements or new requirements. Changes to the code resulting from incorrect coding or logic shall utilize the PRACA system.

SCRs will be reported on the Software Change Request Template in Attachment 3, and PRACAs will be reported on the Problem Reporting and Corrective Action Template in Attachment 4. The SCR and PRACA fields must be kept current, and the Software Development Team will maintain a log of completed revisions using the Software Revision Record (SRR) Template in Attachment 5.

3.2.1 SCR Process

The SCR process to change the baseline software code will utilize the following change control flow:

1. The Software Manager shall review and assign a unique identification number to the SCR.
2. The Software Manager shall determine and document an estimate of the resources (time and people) necessary to accomplish the change.
3. The Software Manager shall approve, disapprove, or defer the SCR and update the SCR fields with appropriate disposition and status information.
4. The Software Development Team shall change the developmental software and unit test the incorporated changes.
5. The Software Development Team shall update the baseline code and system test the baseline software in the operational environment.
6. The Software Configuration Manager shall update the configuration management records to reflect the new software baseline and close the SCR.

3.2.2 PRACA Process

The PRACA process to change the baseline software will utilize the following change control flow:

1. The Software Manager shall review and assign a unique identification number to the PRACA.
2. PRACAs do not require project approval to be implemented. However, a PRACA can be closed without implementation if the Software Manager, Project Manager and

Systems Lead agree that the PRACA does not warrant implementation. A statement to this effect should be recorded in the closure portion of the PRACA. All fields on the PRACA must be filled, and the PRACA status of open/closed/deferred must be kept current.

3. The Software Development Team shall correct the developmental software and unit test the incorporated changes.
4. The Software Development Team shall update the baseline code and system test the baseline software in the operational environment.
5. The Software Configuration Manager shall update the configuration management records to reflect the new software baseline and close the PRACA.

3.3 Baseline Creation

A Software Baseline shall be established upon successful completion and approval of the Software Test Plan (this test must be performed prior to delivery of the software and/or the data generated by software). The baseline shall be established prior to the generation and shipment of any data to the customer. The ISDB Quality Records Project File shall be kept updated to reflect all deliveries to the customer.

Prior to generating a baseline, the Software Manager shall update the revisions of the software under that software project to align with the CM baseline release. The specific software used to generate the results shall be frozen so that results can be reproduced if necessary. Software Development Team members are responsible for ensuring that the appropriate frozen version of the software is available on the ISDB branch server. All project files on the server will be retained until project completion (July 30, 2002) at which time they will be deleted.

A software baseline shall consist of a Zip file of the entire directory (including all sub-directories) of the software project. Directories shall include source, executables, software documentation, drivers, and configuration files. Software compilers or any code required to build the software shall be referenced in the CI List. A Version Description Document (VDD) in the format of Attachment 6 shall be completed for all items included in the baseline. The VDD will include the file name, version, and a description of the changes included in the version.

If the baseline is to be delivered, it will be placed on removable magnetic or optical media and labeled with the following minimum information:

- Project title
- Content description
- Date(s) files were transferred to the media
- Sequence number (if applicable)
- Disposal date.

3.4 Backups

Daily backups will be made of all development areas (source code, object code, executables, and documentation). These backups will be to tape, and tapes will be retained for one week before recycling.

A baseline backup will be performed at the completion of each baseline creation. These backups will be to tape, and tapes will be retained for a period of five years after the completion of the project, at which time they will be recycled.

Backups will be stored at the location specified in Attachment 2. The restoration contact for all backups is the Software Configuration Manager.

Backup data tapes will be labeled to include, at a minimum, the following information:

- Project title
- Content description
- Date(s) files were transferred to the media
- Sequence number (if applicable)
- Disposal date.

3.5 Security

A limited-access software development library, providing controlled storage and distribution of the configuration-managed baseline products shall be maintained by the Software Configuration Manager. Configuration management controls will be automated when at all possible. Electronic access to on-line released products shall be controlled through the use of password controls.

3.6 Commercial Off-the-Shelf Software Control

Due to the legal implications of license violations, all commercial off-the-shelf (COTS) software used in the VMD project must be controlled by the Software Configuration Manager. All COTS software will be checked out to members of the project team subject to the following criteria:

- License expiration
- Number of permissible installations
- Number of permissible concurrent users
- Other applicable license restrictions.

The template to be used for control of COTS software is provided in Attachment 7. It may be maintained either electronically or in hardcopy.

Attachment 1: Configuration Item List (Initial)

Description	Unique name
Software Project Management Plan	VMD-SPMP-Ver1-Rev0
Software Configuration Management Plan	VMD-SCMP-Ver1-Rev0
Software Requirements	VMD-SR-Ver1-Rev0
Configuration Item List	VMD-CI-Ver1-Rev0
Baseline	VMD-ZIP-Ver1-Rev0
Software Test Plan and Inputs	VMD-STP-Ver1-Rev0
Software Test Plan Results	VMD-STPR-Ver1-Rev0
Version Description Document	VMD-VDD-Ver1-Rev0
Source Files	{filename}.src (or .cob, .asm, .c, etc., as appropriate)
Object Files	{filename}.obj
Executable Files	{filename}.exe

Attachment 2: List of Electronic File Locations

During development, computer files will be maintained according to the following directory structure.

File Type	Location Type	Location
Source code	Host and path	VMD computer, C:\VMD\Development\Src
Object code	Host and path	VMD computer, C:\VMD\Development\Obj
Executables	Host and path	VMD computer, C:\VMD\Development\Exe
Documentation	Host and path	VMD computer, C:\VMD\Development\Doc
Backup Tapes	Storage Room	Bldg 1230 Rm 263B

Draft and final deliverable files will be baselined according to the following directory structure.

File Type	Location Type	Location
Source code	Host and path	ISDB Branch Server, C:\Projects\VMD\Deliverables\Final\Source
Object code	Host and path	ISDB Branch Server, C:\Projects\VMD\Deliverables\Final\Object
Executables	Host and path	ISDB Branch Server, C:\Projects\VMD\Deliverables\Final\Executable
Documentation	Host and path	ISDB Branch Server, C:\Projects\VMD\Deliverables\Draft\Documentation *and* C:\Projects\VMD\Deliverables\Final\Documentation
Backup Tapes	Storage Room	Bldg 1230 Rm 263B

Attachment 3: Software Change Request Template

Software Change Request (SCR)

Project Name: VMD	**Identification Number:** SCR-_____
Initiator:	**Date Submitted:**
Affected Baseline CI:	
Description of Change / Reason for Change:	
Disposition:	**Disposition Date:**
Status:	**Status Date:**

Attachment 4: Problem Reporting and Corrective Action Template

Problem Reporting and Corrective Action (PRACA)

Project Name: VMD	**Identification Number:** PRACA-_____
Initiator:	**Date Submitted:**
Affected Baseline CI:	
Description of Problem:	
Disposition:	**Disposition Date:**
Status:	**Status Date:**

Attachment 5: Software Revision Record

Software Revision Record (SRR)

SCR/PRACA Number	Description of Change	Affected File(s)	Date

Attachment 6: Version Description Document

Version Description Document

Baseline: VMD-ZIP-Ver1-Rev0

SOURCE FILES

File Name	Version	Changes Implemented

EXECUTABLE FILES

File Name	Version	Changes Implemented

DRIVER FILES

File Name	Version	Changes Implemented

CONFIGURATION FILES

File Name	Version	Changes Implemented

OTHER FILES

File Name	Version	Changes Implemented

Attachment 7: Commercial Off-the-Shelf Software Control Template

COTS Control

Title:				
License Expiration Date:				
Permissible Installations:	**Permissible Concurrent Users:**			
Other License Restrictions:				
Checked Out To	**Date Out**	**Number of Installations**	**Number of Users**	**Date In**